WINERGY POWER

February 28, 2006

Department of the Interior
Minerals Management Service
Attention: Rules Processing Team (RPT)
381 Elden Street
MS–4024
Herndon, VA 20170–4817

RE: Alternate Energy-Related Uses on the Outer Continental Shelf: 1010–AD30

Dear Rules Processing Team:

It has been an honor and a privilege to respond to the RIN 1010-AD30 Advanced Notice of Proposed Rulemaking for Alternate Energy-Related Uses on the Outer Continental Shelf.

We look forward to your review of our responses, which accompany this email and include:

- Formal responses to RIN 1010-AD30
- Attachment 1 – A proposed Scope of Work
- Attachment 2 – A sample lease for a commercial offshore activity for review

Personally, I am very proud of the effort that Winergy Power has put forth in this response and I look forward to being of assistance to MMS whenever needed.

Respectfully yours,

Dennis J Quaranta
President
Winergy Power

WINERGY POWER COMMENTS ON MMS ANPR FOR ALTERNATE ENERGY-RELATED USES ON THE OUTER CONTINENTAL SHELF

REGULATION IDENTIFIER NUMBER 1010-AD30

SUBMITTED BY WINERGY POWER 2-28-06

INTRODUCTION

With the backdrop of historically high energy prices, dwindling oil supplies, and a recent State of the Union address that emphasized our need to end "America's addiction to foreign oil," this proceeding could hardly be more topical. According to the *BCC Research, Inc.* report, *World Markets for Renewable Energy Systems,* **"The energy requirements of the world's population are minuscule compared to the quantity of energy available from renewable sources."**

A significant portion of those bountiful renewable resources lies near our shores, in the wind, waves, currents, tides and thermal gradients of the ocean. However, the industries that are harnessing those energies and bringing them to land have not yet appeared in the U.S.

With well-considered regulations that allow an offshore renewable energy industry to start and flourish, this rulemaking process could result in development of large-scale marine renewable energy projects that make a significant dent in the United States' need for fossil fuels. Winergy Power's goal, in responding to all aspects of this ANPR, is to help produce rules that are both functional and compliant with all existing regulations, as well as being sensible from an economic standpoint, so that the offshore renewable energy industry can commence in the United States. While some our comments are specific to wind, many are appropriate for all renewable technologies sited on the OCS.

Winergy Power is in a position to be an active market participant in this new Industry. The company was formed to develop offshore wind farms in the Northeastern United States. Its founders have backgrounds in both the offshore mariculture and energy industries and are very familiar with the existing regulations governing the permitting, construction and operation of offshore activities. With financial backing from JP Morgan Partners, a company that has demonstrated its commitment to the renewable market by funding the development of almost 1,000 megawatts of onshore wind projects, Winergy Power hopes to commence development of large-scale offshore wind farms as soon as the regulatory framework allows.

It is important to recognize that the offshore renewable energy industry is but an idea at present in the United States. There are no offshore wind farms and few small-scale demonstrations of wave and current technologies. The United States is at a crossroads. Creation of a thriving offshore renewable energy industry will provide many public benefits beyond simple financial compensation to the U.S. government. Renewable energy reduces our need to import foreign oil and natural gas, increases our energy independence, enhances our economic security by eliminating the ability of other countries to affect our economy, reduces pollution, and emits no greenhouse gases.

When Germany and Denmark, the two countries furthest along in development of wind energy, reached this crossroads more than 10 years ago, they chose to subsidize the wind industry with a variety of mechanisms that were far more potent than the United States Production Tax Credit. While it is clear that subsidies are not part of this proposed rulemaking, it is important to recognize that the path that the United States has chosen – one where private capital is harnessed to help create substantial societal benefits – must be fully weighed as part of this proceeding. In order for private capital to move the offshore renewable energy industry forward at the pace that is needed, and not require public financial assistance, this process must yield clear rules that allow developers to proceed with certainty.

The offshore renewable energy industry is nascent in the United States. There is no experience with the technologies in a production environment and there is no established industrial base that will manufacture, ship, install and operate the facilities. To this end, we are recommending the definition of a regulatory regime that encourages construction of a phased series of pilot projects that will lead to full commercialization of offshore renewable energy technologies. The end game for this series of carefully selected pilot projects will be the realization of an industry that delivers all the societal benefits of a large, economically viable base of renewable energy-powered projects, while also providing a fair return to the government for permitting the siting and operation of those facilities in Public Trust waters.

Given that the offshore renewable energy industry is in its infancy, few U.S. companies are in a position to commence operations in the near term. The issues surrounding technologies, for example, permitting, competition, economics, etc., are unclear. We believe it would not be beneficial to attempt to create an all-encompassing set of rules governing offshore renewable energy before the full impact of projects – or lack of impacts – can be assessed.

When the offshore oil and gas industry developed 50 years ago starting with the single Kerr-McGee near-shore derrick, there was no attempt to assess all potential resources, define suitable areas for development, predict the environmental impacts, and arrive at a set of rules before *any* offshore platforms were built. Private companies explored and risked the capital to develop this largely unregulated frontier at that time.

The rules governing the development of the offshore oil and gas industry evolved over time based on practical experience. While we believe we should collectively learn from the offshore oil and gas industry's history, we also believe that it is necessary for a number of pilot projects to be built and evaluated before a comprehensive set of regulations should be put in place. Therefore, it is our opinion that this proceeding should focus on multiple phases, the first in which a number of pilot projects are permitted, followed by a second period in which additional projects are permitted based on rules developed from evaluating the initial pilot projects.

Regulatory frameworks already exist that can be applied to pilot projects. There is a body of law regarding the rights and responsibilities of leasing open ocean areas for power generation. In the late 1980s, ocean thermal energy conversion (OTEC) was explored in the waters off Hawaii. Laws and regulations (USC Title 42 Chapter 99) were put in place to manage OTEC development. This could be used as a model for the development of regulations that MMS is now seeking. In addition, Federal procedures used to assess applications for offshore commercial activities have a basis of uniformity that can be utilized by MMS in this rulemaking. These are covered in the Rivers and Harbors Act and Clean Water Act, National Environmental Policy Act (NEPA), Endangered Species Act, Magnuson – Stevens Fishery Conservation and Management Act and the Fish & Wildlife Coordination Act.

We suggest that the most appropriate way to start this industry is allow developers to propose pilot projects to MMS, subject those projects to established permitting processes and regulations, and adjudicate any conflicts, uncertainties and competitive issues on a case-by-case basis. In this pilot phase, qualified project developers should commence and pay for any site-specific studies using outside consultants.

It is our belief that there will be little competition during this first phase, as there are few active developers. This would allow MMS to assess the small number of proposed projects on a case-by-case basis, evaluate the projects for future rulemaking and, most importantly, get the industry started.

CONCLUSION

This rulemaking process has large historic implications for the future of the country. We are entering a brand new era. Our European neighbors have shown the world that a renewable energy industry that is fostered by government policies and regulations can quickly grow to have a significant impact on national energy consumption. The United States needs to learn from their experience and greatly accelerate our own transition to a renewable energy-based economy. This transition can be shortened dramatically by establishing a regulatory environment that encourages rapid deployment of renewable energy projects on the OCS.

At present, the United States uses 22 million barrels of oil each day, 60% of which is imported. And, while the US consumes 26% of the world's oil, we have less than 3% of the world's known reserves. With the growing economies of China and India consuming a larger percentage of the world's fossil fuels, competition for dwindling resources can only intensify, significantly driving up the cost. This proceeding is one of the few focused national efforts than can help the country turn the corner to a sustainable economy.

For this proceeding to have the necessary impact, the short-term focus should be on determining a method to initiate a number of commercial scale pilot projects. The pilot projects need to be of a size that, first, allows for the assessment of true commercial scale projects and, second, allows the formation of the sizable support infrastructure to install and service those projects and create an economic basis for the industry going forward.

MMS could permit pilot projects on a case-by-case basis, working within the existing NEPA regulatory framework. Once the first projects are operational, MMS could use the practical experience gained to create a body of regulations that are necessary to manage a bona fide industry.

We suggest that MMS proceed by creating an "open RFP" in which MMS invites developers to propose projects at sites the developers themselves have chosen. In this proposed program, MMS can evaluate the respondents, qualify the sites, mediate any overlaps, and negotiate the terms under which each developer is allowed to proceed within the existing regulatory frameworks.

Timeliness should be the guiding principle. The offshore renewables industry is being born. A regulatory regime is needed that accommodates this phase of industry development, encouraging its growth into a new domestic energy resource base for the nation.

COMMENTS

1. ***Are there regulatory regimes, either in the U.S. or abroad, that address similar or related issues that should be reviewed or considered as MMS moves forward with the rulemaking process?***

   Comment: The rapidly growing interest in placing wind turbines in the EEZ embodies the process and procedures that are identical to those needed for OTEC (Ocean Thermal Energy Conversion). At the present time, with the Energy Policy Act of 2005, MMS is the lead agency.

   There is a body of law regarding the rights and responsibilities of leasing open ocean areas for power generation. In the late 1980s, OTEC was a hot topic for the waters off Hawaii. Laws and CFRs (USC Title 42 Chapter 99) were put in place to manage OTEC development. This could be used as a model for the development of regulations that MMS is now seeking.

   We suggest that the Federal procedures used to assess applications for offshore commercial activities have a basis of uniformity that can be applied for MMS in this rulemaking. These are covered in the Rivers and Harbors Act and Clean Water Act. Appended to that legislation are the other laws, such as the National Environmental Policy Act (NEPA), Endangered Species Act, Magnuson – Stevens Fishery Conservation and Management Act and the Fish & Wildlife Coordination Act that enable or focus attention on specific resources.

   Effectively all offshore wind energy development has thus far taken place in Northern European countries. Permitting legislation and regulatory regimes have been developed in each of those countries in accordance with the European Commission (EC) Directive 2001/77/EC (On The Promotion Of Electricity Produced From Renewable Energy Sources In The Internal Electricity Market).

   Article 6(2) of EC Directive 2001/77/EC requires the evaluation of the existing legislative and regulatory framework with regard to authorization procedures for renewable energy generating stations. In summary, each nation in the EU pursuing offshore (or other) wind energy development must review their internal legislative and regulatory frameworks and adjust them to cover relevant aspects of the impacts of offshore wind energy development.

   National laws assign responsibility for oversight of offshore wind development to various agencies, depending on the complexity of the internal governing structure. In the United Kingdom, for example, the national government has authority over all offshore development, with regulatory authority residing in the Department of Transportation and Industry (DTI) (except in Scotland). The central government, following a policy of encouraging the development of offshore wind, took up the task of mapping out the areas of the coastal sea to identify those that are suitable for wind projects. All companies applying to erect offshore wind farms are required to perform a full strategic environmental assessment (SEA).

   The results of SEAs performed during the first round of permitting for offshore wind farms are being used by DTI to eliminate a number of areas from consideration of future permits

due to environmental or commercial concerns. Developers proposing second round projects are being directed to open ocean areas that have not been contraindicated by the SEAs.

The central government issued an Energy White Paper that committed the Government to extend the authorization procedure to cover beyond the territorial sea, to what is being called the Renewable Energy Zone (REZ).

In Denmark, the progenitor country for large-scale offshore wind farms, all permitting is governed by Statutory Order no. 943, which came into effect in January 2005. This modification of the national environmental protection act (Consolidated Act no. 753) is configured to streamline the process for issuing permits for commercial activities. The modification specifically focuses permitting efforts on the identification, amelioration and process for permit activities that might cause pollution (of the air, water, land), and activities that may cause international disputes. The Danish government has signed an agreement with the German government, through their respective ministers of the environment, to cooperate on investigating the impact of wind turbines on birds, seal, harbor porpoise and fish. The large areas of contact between the two countries' territorial waters in the North Sea and Baltic Sea make this a logical partnership. It seems likely that such an agreement will also be developed with Sweden.

These Nordic governments guarantee a price for the power and also insure the projects.

The British government fully funded the development of the country's first offshore wind park demonstration at Blyth**.**

PROGRAM AREA: ACCESS TO OCS LANDS AND RESOURCES

As a precursor to answering the specific questions and by way of background and overview, it is important to understand that renewable energy projects are extremely capital intensive and have a number of hurdles that must be overcome before their economic viability becomes certain. As a result, the ability to finance projects is as much or more of a driver of the feasibility as are the underlying project economics. It is a virtual requirement that sites be let to developers for long enough periods of time to ensure that projects are financeable. Given the risks and uncertainties associated with development of offshore wind, it appears that initial rights to develop projects should endure for 40 years or more. Ideally, barring any violation of terms and conditions, the right to keep the project operating at the designated site should be considered evergreen.

In order to fully design a project and comply with all anticipated environmental and regulatory requirements, it is certain that there will be a substantial amount of due diligence required for each site. This due diligence would be cost-prohibitive if required prior to issuance of rights to a site. The most expedient way to mete out sites would be to give developers rights to sites contingent upon completion of the due diligence. The developer would be required to complete certain required due diligence (i.e., EIS's, geological research, utility interconnection research, etc.) within a prescribed period or forego development rights). During the due diligence period, the developer could be required to post a completion bond for the due diligence. The amount of this completion bond should not be so onerous as to discourage developers or render the economics unfeasible. After the

developer completes the due diligence in the prescribed period, the developer should then be granted the right to complete the project and be given another period of time in which to complete this phase of development, perhaps 3 years, or more depending on the size of the project, equipment availability, or extraordinary events. If the developer fails to commence construction within the prescribed period, including normal remedy rights, the developer would forego the rights to complete the project. Here again a completion bond could be considered so long as it is not so large as to compromise the project's financeability. Once the project is completed, there should be little that could result in a suspension or cancellation of rights to the project site. Any ability to suspend or cancel the rights to the project site would seriously limit the project's ability to secure financing.

***General issues:* Please provide information on how MMS can best:**

A. ***Provide access for resource and site assessment***.

Comment: The Developer is in the best position to identify sites for their proposed projects. In the case of offshore wind, developers have the responsibility to quantify the wind potential and seek sites that can both harness the renewable resource, minimize environmental impacts and reasonably connect to onshore electric transmission or distribution lines.

MMS could assist the developer by letting them know that the site that the developer is evaluating has no inherent problems. They should let the developer know this before they initiate detailed site-specific studies. MMS could provide initial consultation to any prospective developer to help them identify the sites that they feel are permittable.

B. ***Issue the appropriate instrument (e.g., leases, easements, rights-of-way).***

Comment: Developers will need exclusive leases to the water columns in which the renewable energy power generation devices and any associated infrastructure will stand, and a right of way (ROW) for a transmission cable to shore. The ROW will need an easement around it. Consideration might also be given to a future offshore transmission grid, and that could be "reserved" for a future 10 years hence. This is in keeping with the spirit of Section 368 of the Energy Policy Act of 2005, although that Section spoke only of the 11 contiguous western states.

As an example of a lease for an offshore commercial activity, please review Attachment 2, which is the text of a lease granted by the State of New York for a mariculture facility in State coastal waters.

C. Solicit interest for development projects.

Comment: It is our belief that the best method of soliciting interest would be to invite potential developers to propose projects. MMS could solicit proposals for all renewable energy technology projects in an open enrollment. Prospective developers would be required to pre-quality before submitting an application for a permit and reservation of a site. The outreach to enter the program would be through a link on the MMS website and through

announcement of the invitation to propose distributed to publications dealing with renewable energy power news.

MMS Renewable Energy Web site announcements plus normal PR announcements emailed to a qualified list of publications, editors, wind and other renewable offshore energy organizations should be sufficient to alert prospective developers that opportunities are available.

In the first years, it may be useful to issue RFPs for demonstration projects that will be built under terms that will later not be available. A second round could also be held a few years after a number of pilot projects are permitted and operational. This is the process that is underway in Denmark and England. In this manner, a better baseline of understanding can be gained regarding the necessary steps in the permitting process, the special requirements of individual variations of different wind turbines and bases and the various ocean energy conversion technologies, the possible formation of a transmission consortium, pilot projects involving different technologies, the integration of mariculture, and other technologies and processes as yet unidentified. There may be special categories delineated by depth, base type, geographic extent, etc. If only one developer has the technology to develop the site, they should award that site to the developer. The burden of proof should be borne by the developer to show that they have the adequate resources and technology to develop the project.

The solicitations could be issued in terms of water depths, e.g., 10 feet to 60 feet, 60 feet to 100 feet, 100 feet to 150 feet, and 150 feet to 300 feet.

D. Identify terms and conditions of use such as:

- ***Issuance.***

  Comment: We assume that this is a lease. Please review Attachment 2 that accompanies this response. Attachment 2 contains the text of a lease granted by the State of New York for a mariculture facility in the coastal waters of the State of New York. We recommend that a standard lease be defined for offshore sites, and include terms that are negotiable to allow for project specifics such as financing, pace of development, distance from shore, area, payment terms, and so on.

- ***Duration.***

  Comment: We recommend that the term of the lease and right of way be renewable after 40 years. It is recommended that any wind park that is permitted be given at least three years for completion and operation. There needs to be consideration for the potential of equipment supply shortages and a force majeure clause.

  Once in operation, we recommend that the permit be granted “in perpetuity” so long as the facility is operational a minimum of 11 months in any consecutive 24 month period. By setting the terms in this manner, a viable project will have time to recover from a generic malfunction of some future version, or from a natural disaster. The developer will

have already been "vetted" by the process of qualification that allows them to be an acceptable applicant.

- ***Assignment of rights.***

  Comment: Please review Attachment 2, which accompanies this response. Attachment 2 is the text of a lease that was issued by the State of New York for a mariculture facility in State coastal waters. The issue of assignment of rights is addressed thoroughly in the Attachment. We believe this would be an appropriate model for MMS to follow.

- ***Suspensions and cancellation of rights.***

  Comment: Initially, we think it would be most productive for MMS to negotiate with developers to define failure modes, modified with force majeure clauses and remedy clauses that could result in a rescinding of a lease due to failure to install a planned renewable energy facility within three years of granting of a lease and permits; for failure to operate for an extended period; for gross violations of safety procedures; for violations of any terms of a lease; for criminal acts; for failure to maintain equipment in a safe manner; for criminal acts associated with the physical plant (actions such as acting as a drug storage or transfer point), and so on. The surety bonds could be collected to pay a successor organization for rehabilitation or completion of the facility. For the developer, this added insurance requirement will be high for the first half dozen or so utility-scale renewable energy projects.

  As an example, please review Attachment 2, which accompanies this response. Attachment 2 is the text of a lease that was issued by the State of New York for a mariculture facility in State coastal waters.

- ***Limitation of rights.***

  Comment: Ideally, barring any violation of terms and conditions, the right to keep the project operating at the designated site should be considered evergreen.

  Once assigned a site for development, the developer would be required to complete certain compliance tasks as prescribed in the NEPA process within a specific period or forego development rights. After the developer completes the due diligence in the prescribed period and is awarded a permit to operate, the developer would then have three (3) years to complete each phase of their planned operation (or more, depending on the size of the project or extraordinary events), or forego the rights to complete the project.

  The permit that is issued will define the conditions of noncompliance that could occur and cause the rescinding of the permit during operation of the project once it is complete and is operating.

  In summary, rights could be limited as follows:

- Rights are limited to develop the initially proposed project only (i,e. not unfettered rights to the site)
- Rights should first be contingent upon outcome of due diligence, and then secondarily contingent upon construction of the project, both within prescribed time periods
- Once a company begins the studies on the site it should become exclusive.

As an example, please see Attachment 2, which is the text of a lease granted by the State of New York for a mariculture facility with New York State coastal waters.

E. Identify geographical areas of interest for:

- ***Resource and site assessment.***

Comment: All open US Coastal waters are candidate areas for the development of renewable energy projects. At present, developers are in the best position to propose sites.

The geographical areas should be delineated in terms of water depth, e.g., 10 feet to 60 feet, 60 feet to 100 feet, 100 feet to 150 feet, and 150 feet to 300 feet.

- ***Development feasibility.***

Comment: It should be left to the developer to assess development feasibility. Any applicant that requests to permit and lease a site and then operate renewable machinery at the site will have been pre-qualified to apply by MMS. The qualification due diligence will have covered the business plan of the applicant, the financial underpinnings of the proposed project, the applicant's ability to fund the project, and the technologies that are to be implemented.

F. Ensure fair competition.

Comment: As the industry does not yet exist in the United States, it may be many years before there is active competition for the same sites. Initially, it is in the interest of the United States to foster accelerated development of the offshore renewable energy industry. We believe that at this stage of development of the industry, the competition should center around each company's ability to actually carry out full development of a proposed project.

It is necessary to protect qualified developers' rights to a site in a manner that precludes appearance of a bidding war after the developer has performed the initial engineering, environmental and regulatory studies for a site. This will ensure fair competition.

G. Process permits and applications.

Comment: NEPA has already established a regulatory framework for expeditiously carrying out of EIS activities. It is imperative that, upon submittal of a completed and accepted application, it is reviewed, processed and the permit is issued in a timely manner.

"The issuance of any license for ownership, construction and operation of an open ocean windmill farm shall be deemed to be a major Federal action significantly affecting the quality of the human environment. For all timely applications covering proposed facilities in a single application area, and for each application relating to a proposed open ocean windmill farm, the "Lead Federal Agency" shall, in cooperation with other involved Federal agencies and departments, prepare a single environmental impact statement, which shall fulfill the requirement of all Federal agencies in carrying out their responsibilities pursuant to this chapter to prepare an environmental impact statement. Each such draft environmental impact statement relating to proposed facilities shall be prepared and published within 180 days after notice of the initial application has been published. Each final environmental impact statement shall be published not later than 90 days following the date on which public hearings are concluded. The "Lead Federal Agency" may extend the deadline for publication of a specific draft or final environmental impact statement to a later specified time for good cause shown in writing." [USC Title 42 Chapter 99]

H. Process pre-application resource assessments.

Comment: If MMS will be issuing requests for proposals to develop, then MMS can screen prospective projects by ascertaining whether the developer is pre-qualified, whether the proposed project is in the region of interest, does the project fit in with the water depths and connection points?

The time frame for a response is defined within the NEPA process. [NEPA] 30 to 45 days is appropriate from time of request.

If this question is focusing on the wind, current, tidal, or wave resource, then the developer must furnish a business plan that incorporates physical data into the financial projections as part of the pre-qualification process.

I. Allow concurrent developments.

Comment: There are a number of technologies that can be used to convert energy above and in the ocean into electricity usable onshore and for other processes at the site. For example, an offshore wind farm may easily co-operate in the same area as wave energy and marine current operations, and all are compatible with mariculture operations.

We believe that, at least initially, there will be little overlap of proposed projects. Longer-term, we believe that the electricity generated at the site may be used to power other processes, such as the production of hydrogen or alternative fuel sources. For example, an offshore wind farm developer may also wish to develop a wave energy power plant at the same site, or diversify the output of a wind farm to produce synthetic fuels.

J. Minimize multi-use conflicts

Comment: The developer, in consultation with MMS, can go through a thorough site review prior to submittal of an application. We believe that this will alleviate a large proportion of multi-use conflicts that might manifest themselves. At minimum, prospective developers

should be steered away from locating within shipping lanes, sand mining regions, marine sanctuaries, artificial reefs, hazardous areas, and commercial fishing areas.

Specific questions:

2. ***Possible development scenarios include phased access rights, which would allow for resource and/or site assessments and research prior to securing additional access rights. Rights could be permitted on a case-by-case basis. Development rights would be secured by a competitive process. An alternative would be to require that interested parties secure the access rights to an area prior to conducting assessments and research. Please comment on these possible options.***

   Comment: Number One, a developer must have acquired the right to develop a project before any assessments are made. The reason for this is that resource assessments are costly to execute. Developers cannot afford to dedicate funds to data collection, site physical characterization and project planning before applying for a site that might go to another party.

   Phased access rights works for minerals extraction, but is inapplicable for offshore renewable energy projects.

   Since MMS is not going to conduct wide-area resource and siting assessment, developers themselves will need to pay for the assessments of areas that they have identified. Therefore, sites would have to be provisionally assigned to a developer prior to full assessments being complete. It is our belief that competition will be sparse at first. We support an initial open period in which developers could express an interest in particular sites. In the event that there is an overlap between multiple developers, MMS would negotiate to determine which developer was best qualified to develop the site, evaluate the public benefits of each project, or possibly come up with a sharing arrangement in which each developer is assigned a portion of the site.

3. In cases where applicants or interested parties propose activities that would foreclose competing future uses, how should MMS estimate "a fair return", especially if the competing uses would likely be public uses?

   Comment: Properly sited offshore renewable energy projects should not foreclose any competing future uses, with the exception of commercial drift net fishing. Any revenue loss for drift net fishing is budget neutral.

4. ***What constitutes a geographical area of interest?***

   Comment: An area of interest would be a location where a viable offshore renewable energy project could be placed. Project developers will identify their sites in consultation with MMS.

5. ***What assessments should we require prior to competition?***

   Comment: Several types of assessment may be appropriate:

- Several pilot projects of various sizes should be assessed prior to full competition
- Zones of various depths and/or various currents should be identified and made available for applicants
- Number of onshore connection points
- Which technologies are viable, e.g., several pilot projects of various sizes and lengths of operation
- Willingness and/or capability of onshore utilities to accept the power generated offshore into their grids

Prospective project sites should be identified by developers, who will only proceed with assessments after consultation with MMS to identify whether or not the sites are problematic.

6. ***How should MMS structure the competitive process and the application process used to issue OCS access rights? Should MMS auction access rights or engage in direct negotiation?***

   Comment: Direct negotiation would be preferable for all parties at this stage in the development of the industry. MMS does not have, at this time, baselines of environmental impacts, behavior and power density of the energy source, or the economics of offshore renewable energy projects. All risks are now borne by the developers. It is not necessary to auction anything off until MMS can see whether multiple viable developers show interest in the same area.

7. ***Should MMS take a broad approach to developing a program, or should efforts be targeted to specific regions***?

   Comment: Let the market determine where the greatest interest exists.

8. ***How should MMS consider other existing uses when identifying areas for access?***

   Comment: Developers should identify sites in consultation with MMS. The sites should be chosen so that they do not conflict with existing uses, where possible.

9. ***How should MMS balance existing uses within an area with potential wind and current energy projects?***

   Comment: Currently, the main area of interest for offshore renewable energy projects in Federal waters is on the East Coast and, to some extent, the Gulf of Mexico. Balancing is not necessary since wind turbines are compatible with current energy projects.

10. ***Should MMS require permits for collecting data from vessels? Should we consider this information proprietary? What criteria should we use for holding the information proprietary.***

    Comment: The developer should be required to place any data in the public domain only after being given exclusive rights to a project area. The types of data that is made available

should be specified and agreed to by MMS and the developers. This makes the permitting process more transparent.

11. ***What criteria (e.g., environmental considerations, energy needs, economics) should MMS consider in deciding whether or not to approve a project? What criteria should MMS consider for different competing projects (i.e., wind versus current) for the same site?***

Comment: The first criterion is to ascertain whether a prospective developer has the financial wherewithal, organizational competence, and technical acumen necessary to bring a project to completion.

We assume that it is axiomatic that the U.S. needs to develop its large domestic resources of energy. It is known that 69% of all energy consumed in the U.S. is used by people living within 70 miles of the nation's coastlines. More than a quarter of all electricity produced in the U.S. is consumed along the upper East Coast. The encouragement of projects to serve these concentrated areas of need is an essential early target for development of the renewable energy resource of the OCS.

We recommend that once MMS has completed the development of a sufficient body of interim regulations that pilot projects be encouraged to both quickly begin to satisfy the energy needs of the Atlantic Coastline and to spur the development of the industries that will supply that power.

It is unlikely that any ocean energy conversion projects will be proposed for a number of years that will be comparable in generating capacity with offshore wind farms. When the time comes when such projects are proposed, the NEPA process will ensure that a full suite of alternative sites will be considered that will likely lead to satisfactory siting results for most applicants. There eventually may be some project overlap should it be found that the installation processes of two (or more) types of renewable energy conversion devices are compatible and compliant activities.

While considering competing proposals for the same site, it is important that MMS not be tied up with companies looking to block others to slow down their projects. If a situation arises where there are multiple qualified applicants for the same given area, MMS will need to intercede and a determination will be needed. We request that this period of intercession does not last longer than 90 days so as not to hinder any of the applicants in their plans for growth. As part of these deliberations, careful consideration should be given to the potential of using the same ocean area for the different technologies.

PROGRAM AREA: ENVIRONMENTAL INFORMATION, MANAGEMENT, AND COMPLIANCE

Before proceeding to our comments, please refer to Attachment 1 accompanying this response. All the questions posed below are thoroughly addressed in Attachment 1, which is a Scope of Work designed around NEPA requirements, using a format that has been laid

out and approved in USC Title 42 Chapter 99. We have constructed our comments in the context of the attached Scope of Work.

General issues: ***Please provide information regarding:***

K. ***Information requirements needed for environmental management systems for any project.***

Comment: It will take the presence of an uncertain number of offshore renewable energy installations before the impacts of their presence can be understood qualitatively and quantitatively. Possible impacts include alterations in the populations of various fish, mammal, invertebrate, and avian species. Information thus far obtained with offshore wind farms in the waters off northern European countries indicates that impacts are either nonexistent or minimal. Whether this will hold true when multiple offshore wind farms occupy the same area remains to be seen.

Monitoring should encompass period counts of the various benthic, pelagic and avian species, additional monitoring of migrations or specific species when biology consultants conclude that such monitoring is appropriate.

Offshore renewable energy developers should, as good neighbors and users of Public Trust resources, allow use of their platforms for monitoring equipment and provide transportation to biology researchers (and others) during maintenance, security, and other monitoring trips.

Please refer to Attachment 1 accompanying this response. All the questions posed below are thoroughly addressed in Attachment 1, which is a Scope of Work designed around NEPA requirements, using a format that has been laid out and approved in USC Title 42 Chapter 99.

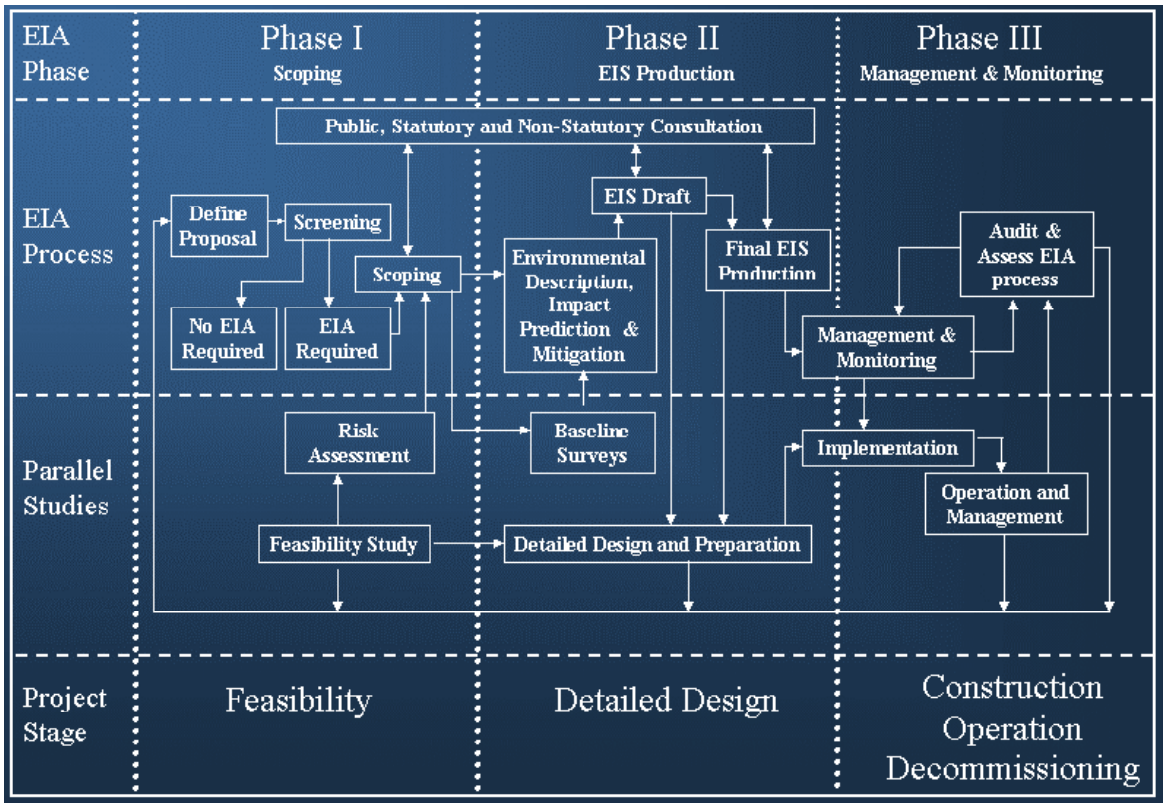
L. Assessments and studies of risks and impacts (site-specific and cumulative) associated with offshore energy and alternate use projects.

Comment: Winergy Power believes that the development of a DEIS and FEIS for individual projects should follow the Scope of Work that accompanies this document as Attachment 1.

M. Examples of best practices for environmental compliance, monitoring, and effectiveness being used in the U.S. and elsewhere.

Comment: Please refer to Attachment 1 accompanying this response. All the questions posed below are thoroughly addressed in Attachment 1, which is a Scope of Work designed around NEPA requirements, using a format that has been laid out and approved in USC Title 42 Chapter 99.

The diagram below shows the EIS process as it is used in the United Kingdom for assessing the environmental impacts of offshore wind farms. Attachment 1 that accompanies this response to the ANPR is more comprehensive than the format laid out in the diagram below.



N. Balancing environmental considerations with national energy needs.

Comment: The phrase "addicted to oil" was voiced in the most recent State of the Union address. The implementation of a formal program to develop offshore renewable energy systems guided by MMS is a tremendous positive first step toward withdrawal from this reliance (in the tradition of many 12-step programs).

According to BLM-NSTC-2004:

> "As the American economy has grown, so has our demand for energy. Our energy use increased nearly 20 percent during the economic boom of the 1990s. … Energy experts predict that our energy use will increase 40 percent by 2025.
>
> As our energy use has increased, so has our need to import energy resources from foreign countries. Today, we import 58% percent of the oil we use.
>
> …Our rapidly increasing use of natural gas to heat and cool our homes, generate electricity, and provide raw materials for chemicals and fertilizer will also require that we double our imports of this critical energy resource by 2025."

The offshore wind and in-ocean energy resources are astronomically large. In an era where the U.S. must import continuously larger portions of its energy supplies, the existence of such a large energy resource so close at hand is, literally, a godsend.

Before plunging heedlessly into development of the renewable energy resources flowing over the OCS, one must consider the inescapable fact that all energy conversion processes have some impact on the environment, whether in the manufacture of the mechanisms for conversion, in their operation, or in their decommissioning.

Thus, a detailed consideration of the potential environmental impacts of placing the machines where they can do their work is needed before any project proceeds, whatever the technology used. Standards and processes already exist (the NEPA process – see Attachment 1) to guide the process for anticipating all environmental impacts before they occur.

Even with such a comprehensive, well-defined process in place, the placement of wind turbines and other renewable energy conversion devices in the open ocean will be a new activity in the U.S. Luckily, a number of projects of various sizes have already been implemented in the waters lying by several northern European nations. The environmental impacts are being thoroughly monitored and regular reports have been issued, and have been highly positive, i.e., the environmental impacts to date have been minimal and even, in a few cases, positive.

These early experiences with offshore renewable energy power plants have been widely dispersed. They are to be followed in the near-term with a continuous build-out that will steadily increase the magnitude of the power flowing to shore and the count of wind farms in the waters surrounding northern European nations.

These first utility-scale wind farms are pilot projects that are allowing the predictions of benign environmental impacts to be tested in the real world.

We suggest that the U.S. offshore marine environment will be best protected if the U.S. follows this successful model, i.e., that the MMS seek to encourage and permit the development of a series of pilot projects in different regions of the EEZ, representing varying marine conditions. In this manner, the environmental (and other) impacts can be evaluated carefully and fact-based judgments made as to the full environmental impacts that will be carried by renewable energy facilities on the OCS.

Specific questions:

12. ***What types and levels of environmental information should MMS require for a project?***

Comment: Winergy Power has attached a comprehensive Scope of Work as Attachment 1 to this response to the MMS ANPR. This Scope covers all the information required as part of the NEPA process.

13. ***What types of site-specific studies should MMS require? When should these studies be conducted? Who should be responsible for conducting these studies?***

Comment: The developer must perform or contract to perform all requires tasks for completion of a DEIS and FEIS. The permitting tasks will be performed between the time

the applicant is qualified according to MMS criteria (and assigned rights to a project area), and when the project is permitted and the lease signed. MMS is now the lead agency, as we perceive it, and coordinates the various permits required by all other Federal agencies involved in the NEPA process, plus its own oversight of leases, contracts, rights of way, rental fees and royalties.

14. ***What should be the goals and objectives of monitoring, mitigation, and enforcement?***

Comment: The goals are to ensure compliance with all NEPA concerns, the concerns with other regulations and other agencies concerned with open ocean activities. The objectives of monitoring, mitigation and enforcement (at the project owner's expense) are to ensure that the environmental disturbances caused by the installation, operation, maintenance and removal of the physical plant of any project are minimized and fully mitigated if they occur.

An additional monitoring goal is to ensure that correct payments are made. MMS will need access to power delivery data in order to monitor compliance with payment schedules.

15. What types of impacts are of concern? What are effective approaches for mitigating impacts? How can mitigation effectiveness and compliance with Federal environmental statutes be assessed?

Comments: While unlikely, offshore renewable power systems and renewables-powered systems may produce unanticipated environmental alterations, economic effects, changes in navigation, recreational impacts, political impacts, and societal impacts.

The process will be gradual and would take place over a number of years, perhaps decades. Each unit of electricity that flows from a renewable resource will be one that is not needed from a depletable and/or polluting source.

A number of boats and work craft such as ships, tugs, barges and lift boats will be needed to construct, operate, maintain and dismantle offshore wind farms. The fleet will grow as the industry expands. Some of the impacts will be new or enlarged markets for raw and processed materials. Some economic impacts, such as a new industrial base (or several new industries), renewed marine industries such as specialty boats and cranes, expanded employment, and so on, probably are not to be "mitigated."

Machines that become obsolete or are destroyed by intense meteorological events would need to be removed. That is the function of the environmental bond (insurance). However, in recognition of the fleet of abandoned platforms in the GOM, and of the large demands on the insurance industry in this area due to the 2005 hurricane events, we suggest that the federal government make indemnity insurance available to project developers. This type of program can be administered in the same way as crop insurance has been since 1938 (FCIC – Federal Crop Insurance Corporation). Project developers could pay into this fund instead of purchasing insurance on the open market. We suggest that this fund could even be administered by the FCIC since the organizational infrastructure and procedures are already in place.

Two of the limited range of potential contaminants associated with renewable energy power plants are small amounts of transformer fluids and lubricants. The potential of environmental damage from transformer fluids can be eliminated by requiring the use of mineral oil, which is environmental benign. Lubricants may not qualify for such a favorable regard. Close monitoring and paperwork will be needed to order to account for all lubricants present at offshore renewable energy power plants.

There is evidence that offshore wind farms, particularly those with gravity bases, become "fish attraction devices" (FADs). This effect has been observed at the Nysted wind farm in the Baltic Sea (which has gravity bases for 70 wind turbines), has been observed in its early stages at Horns Rev, which features 72 wind turbines on monopile bases, and has been observed at hundreds of oil and gas platforms in the GOM and elsewhere. The general emergence of such an effect might mean that offshore wind farms will serve as "natural" marine sanctuaries and marine resources enhancement areas.

16. What regulatory program elements lead to effective enforcement of environmental requirements?

Comments: The NEPA process thoroughly addresses this.

17. How should environmental management systems be monitored (by the applicant, the MMS or by an independent third party)? What should be the MMS roles versus the roles of industry for ensuring appropriate oversight and governance?

Comment: Please see Attachment I attached to or accompanying this response. The applicant should be responsible for their own monitoring. Verification of the results should be reviewed by MMS on an annual basis.

The permit that is issued should have all the criteria required to keep the project in compliance. The privilege of operating a renewable energy project on the OCS, and the accompanying ROW easement, can be rescinded by MMS if the applicant does not keep the operation in compliance with the conditions defined in the permit. MMS will ensure compliance through an active monitoring program set forth as permit conditions prior to issuance of the permit and lease for operations. Monitoring could be carried out in a collaborative effort involving the agencies, both federal and state, and the academic community.

PROGRAM AREA: OPERATIONAL ACTIVITIES

<u>General issues:</u> Please provide information on:

O. Permitting pilot projects.

Comment: The public lands of the United States have played a major role in the settlement and the development of the country. During most of the 19th century, national policy promoted disposal of public domain lands to stimulate settlement of the West. From 1812 to 1935, more than one billion acres of land were transferred to individuals and organizations through land sales, homesteading, and grants to railroads. In the late 1890s, the federal government began to set aside lands for specific purposes such as national forests, parks,

military reservations, and wildlife refuges. The remaining public domain lands were managed by the Department of the Interior (DOI). This same concept should be applied for the OCS for advancement of the renewable energy resources that are being planned for development.

With this being said, the goal for MMS should be to provide responsible land and resource management that protects and enhances the resource, protects the environment, and provides efficient and effective service to the public.

MMS should establish pilot projects within coordinated management areas. Each one of these areas should be selected in concert with the applicants.

The department should develop a coordinated management plan on an ecosystem basis for each selected area. Each plan should include all federal land and resource management agencies and state and local governments when appropriate within the designated area. The pilots should begin operation as soon as possible and no later than 2009 and operate for the full lifetime of the equipment.

Data from these sites will be made available to the agency, on a totally transparent basis, so that MMS can establish a baseline that would include actual impacts to the environment, wind fields, shipping issues, etc.

There needs to be multiple pilot projects for each type of technology. Every geographical area could have multiple pilot projects. As an illustration, there were numerous pilot projects in the Gulf of Mexico at the beginning of the offshore oil and gas industry. To encourage multiple developers to enter the industry, no single applicant should be allowed to develop more than three (3) demonstration projects of any given energy conversion technology. For wind turbines, each pilot project should be a minimum of 200 turbines phased in over a period of 3 to 5 years. The pilot projects need to be of a size that, first, allows for the assessment of true commercial scale projects and, second, allows the sizable support infrastructure to be built to install and service those projects and create an economic basis for the industry going forward. Similar specifications could be applied to other types of ocean energy conversion devices or other applications of ocean energy at the site of operation.

Different concepts should be addressed in these various pilots. One could be in an area where there already is ongoing work to forge ecosystem-based management approaches and include all federal agencies' responsibilities in the area. Another could be an effort focusing on the wind fields located on the OCS. This would lead to, in the future, a baseline of anticipated wind outputs for MMS to establish a revenue or royalty return for both the applicant and the country, thereby establishing a fair return for both entities.

Starting in fiscal year 2006, applicants for pilot projects should be required to post a bond of $1,000,000 for each site that they are awarded. It is anticipated that the medium-term impacts of allowing and closely monitoring a series of pilot projects would result in better efficiencies in project oversight, permit and lease application, and contract negotiations through improved procedures and regulations.

One rationale for encouraging the development of utility-scale pilot projects is that the areas occupied by such projects would be very small when compared to the massive "open area" that is the ocean over the OCS.

Pilot project developers should be relieved from payment of royalties and be charged only sufficient fees to cover land rentals. The reason for relief from royalty fees for pilot project developers is that the initial developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Pioneer developers will incur significantly higher costs than will developers that come later.

By addressing pilot projects in this manner, the applicant (if qualified) should receive the rights to the site selected without going through a competitive bid process. This process would then insure that projects are built.

P. ***Ensuring human health and safety on and adjacent to the project site.***

Comment: All projects must be OSHA-compliant.

Q. Protecting environmental resources during construction, production, and removal.

Comment: Existing NEPA provisions and implementing regulations are likely to cover all, if not the very high majority, of impacts of offshore renewable energy facilities. Implementing agencies such as the U.S. Army Corps of Engineers, EPA, National Marine Fisheries, U.S. Coast Guard and others have well-defined responsibilities for enforcement of the NEPA process.

R. ***Identifying design and installation requirements associated with new projects and modification of existing facilities.***

Comment: We suggest that developers provide detailed specifications of the installation procedures as part of the NEPA process prior to granting of permits.

S. Identifying production requirements as a component of diligence.

Comment: Pilot projects will set the standards for identifying production requirements. At present, there is no factual basis on which to set production requirements.

T. Managing end of life and facility removal.

Comment: The NEPA process requires a full description of end-of-life removal processes. However, in recognition of the fleet of abandoned platforms in the GOM, and of the large demands on the insurance industry in this area due to the 2005 hurricane events, we suggest that the federal government make indemnity insurance available to project developers. This type of program can be administered in the same way as crop insurance has been since 1938 (FCIC – Federal Crop Insurance Corporation). Project developers could pay into this fund instead of purchasing insurance on the open market.

U. Conducting oversight responsibilities (e.g., inspection, monitoring, enforcement).

Comment: The permit conditions will detail the inspection, monitoring and enforcement requirements.

V. Identifying technology assessment and research needs.

Comment: This is a responsibility already carried by wind turbine and base manufacturers, installation equipment manufacturers, and service organizations. The Department of Energy has an offshore wind technology development program and can be consulted on the present and longer-term needs of the industry.

W. Preventing waste.

Comment: The NEPA process requires thorough planning for all forms of waste that might be generated.

X. Conserving resources.

Comment: The conservation of nonrenewable resources is an inherent benefit of renewable energy-based power production systems.

<u>Specific questions</u>:

18. What options should MMS consider as alternatives to facility removal? Are there unique issues (such as liability) associated with those options?

Comment: The options will vary with the type of technology that is implemented.

The Winergy Power option, which will involve use of a lift boat as the base, will allow simply disconnecting the wind turbine from the transmission cable, and floating it back into port.

A second option is to remove the equipment, then replace it with the next generation of the same type of technology.

Under NEPA, appropriate bonds must be posted to ensure that the end-of-life deconstruction procedures will be carried out and return the Public Trust to an acceptable condition. These bonds must always be kept in force as a requirement for the final issuance of the permit.

19. What engineering challenges should be considered when operating in an OCS environment?

Comment: The challenges are site-specific and the technology should be able to address conditions met in the specific areas of the marine environment. These challenges can be identified and quantified through a series of pilot projects. Furthermore, several qualified third party certification organizations exist that have extensive experience with marine

operations, such as the American Bureau of Shipping (ABS). Each developer should be responsible for assessing and obtaining certification from the necessary certification agency.

20. ***What safety issues exist when operating an energy production facility on the OCS?***

    Comment: This will be addressed in the application process. OSHA regulations require a detailed plan to avoid hazards to life and health and to minimize the danger of introducing contaminants into the environment. Complete plans are also required for preparing for extreme weather events and disaster recovery, as well as reporting for incidents at any facility.

21. ***How should operational activities be monitored (e.g., annual on-site inspections with verification of operating plans)? Is there an appropriate role for the applicant and independent third party certification agents? Describe existing models that could serve as a prototype inspection and monitoring program.***

    Comment: The American Bureau of Shipping (ABS) will perform an annual inspection.

    Following the processes defined for the GOMR, we recommend that MMS carry out an inspection of a project site before construction commences, once during construction, once during the first 6 months of operation, once annually, and then once during the decommissioning period.

    With proper training, the operator could furnish semi-annual reports on operating conditions. The operator will be carrying out inspections in accordance with DNV (Det Norske Veritas) Offshore Standards DNV-OS-J101 specification for In-Service Inspection, Maintenance and Monitoring of offshore wind farms.

22. ***Are there special considerations that MMS should examine in developing an inspection program that covers a diverse set of renewable production facilities? If so, what are they?***

    Comment: American Bureau of Shipping (ABS), DNV–OS-J101 In-Service Inspection, Maintenance and Monitoring and the MMSs' own GOMR.

PROGRAM AREA: PAYMENTS AND REVENUES

As a preamble, the overarching need in this fledgling industry is to foster the industry's development. At this immature stage of development, where the economics of all offshore renewable technologies are yet to be proven, it is very difficult to evaluate what level of fees, royalties, and/or surety bonding might become cost prohibitive and keep the offshore industry from ever developing.

It is our opinion that the offshore renewable industry needs something akin to the Outer Continental Shelf Deep Water Royalty Relief Act of 1995, in which it was recognized that the oil & gas industry needed some economic relief until the deepwater industry was proven.

It is very likely that the offshore renewable energy industry will not be proven for several years. We would therefore suggest that from the outset MMS put in place all the necessary performance monitoring necessary to establish profitability of the initial pilot projects. Royalties should not be assessed on pilot projects. Below are our comments on each type of structure, along with a discussion of how payments and revenues could be refined over time.

***General issues:* Please provide information on:**

Y. ***Bonus bids.***

Comments: The introduction of competitive measures such as bonus bids at this time would only serve to slow the emergence of a viable industry. We believe that the institution of fees should be graduated in three phases.

Instead of a bonus bid, the qualified developer that is awarded a pilot project should pay a one-time fee of $25,000 at the time of lease. The pilot developers would then pay ROW fees of $30 per acre annually in arrears for the interconnection cables within the wind farm and the length of the transmission cable. The fee would be determined on the basis of the average transmission ROW on federal lands in the state in which the cable lands. These would be the only charges on a pilot project. The reason for relief from royalty fees for pilot project developers is that the initial developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Pioneer developers will incur significantly higher costs than will developers that come later.

The second phase of the industry will correspond to the "wildcatter" phase of the development of the oil and gas industry. In this second phase, the one-time closing fee would be $100,000; the developers would pay ROW fees of $45 per acre; and annual land rental fees of $45 per acre for the footprint of the wind turbines. Royalties on projects in this second phase would be determined after 5 years. Royalties would be site-specific for each wind turbine.

When commercial projects are initiated later, commercial developers that win a development tract would be required to pay a one-time fee of $1,000,000 per project, an ROW fee of $50 per acre, $50 per acre for the footprint of each wind turbine, and royalties at a rate to be determined.

Z. Rentals.

Comment: The pilot developers would pay ROW fees of $30 per acre annually in arrears for the interconnection cables within the wind farm and the length of the transmission cable. The fee would be determined on the basis of the average transmission ROW on federal lands in the state in which the cable lands. These would be the only charges on a pilot project. Pilot project developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Pioneer developers will incur significantly higher costs than will developers that come later.

The second phase of the industry will correspond to the "wildcatter" phase of the development of the oil and gas industry. In this second phase, the one-time closing fee would be $100,000; the developers would pay ROW fees of $45 per acre; and annual land rental fees of $45 per acre for the footprint of the wind turbines. Royalties on projects in this second phase would be determined after 5 years. Royalties would be site-specific for each wind turbine.

When commercial projects are initiated later, commercial developers that win a development tract would be required to pay a one-time fee of $1,000,000 per project, an ROW fee of $50 per acre, $50 per acre for the footprint of each wind turbine, and royalties at a rate to be determined.

AA. Royalty terms.

Comment: We recommend that royalties only be introduced in the second phase of the three phases we believe will occur in the development of the offshore renewable energy industry. Each ocean-based renewable energy technology will go through the same phases.

The first phase of the industry will feature pilot projects that will pay no royalties. The reason that complete royalty relief is necessary for the pilot projects is that the first projects will be significantly more expensive to implement than will be projects later on. Pilot project developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future.

We recommend that, during the second phase of development, royalties only be collected after the projects are up and running for a period of at least 5 years. The royalties should be set to allow a satisfactory rate of return for individual projects. Thus, the 5-year moratorium will allow an analysis of project economics, given that each project will vary in terms of their efficiency and availability, plus the build-out costs.

Full royalties should be collected during the third, fully commercial phase of development of offshore renewable energy resources. If the power is being delivered to shore, a formula will be needed to consider added costs of transmission over greater distances to shore (the German and Danish governments increase the length of the favorable feed-in tariffs by 6 months for each extra kilometer distance from shore beyond about 8 miles).

The pilot projects and pre-commercial second-phase projects will have furnished MMS with sufficient experience with which to judge what the appropriate royalty rates are that can be collected from offshore renewable energy projects.

BB. Fees, including cost recovery fees or other payments.

Comment: We believe that cost recovery fees should not be assessed on pilot projects. Cost recovery fees should be collected for all projects that come after pilot projects. This was the process that was followed in the development of the offshore oil and gas industry in the GOM.

CC. Assessing value/benefits and impacts, Public, Private.

Comment: Renewable energy power generation systems provide a number of benefits to society that go beyond the simple supply of commodity electricity. Benefits that renewable energy projects produce include:

(1) Zero emissions
(2) Reduced emissions of greenhouse gases
(3) Reduced reliance on foreign oil and gas
(4) Health benefits including reduced respiratory diseases (Harvard Center for Risk Analysis)
(5) More jobs per unit energy than other power generation sources
(6) Revitalization of local ports of entry
(7) Improved balance of trade due to reduced energy imports
(8) A renewable domestic energy source near areas of high consumption
(9) No depletion of Public Trust resources
(10) Formation of new indigenous industries
(11) Increase in tax base at landing point

DD. Valuing leases, easements or rights-of-way.

Comment: ROW fees for transmission cables and equipment set to match those for transmission acreage fees set by the BLM for cables traversing federal lands in the state at which the transmission cable makes landfall. The fees for equipment acreage should be pegged to actual physical footprint for each piece of stationary equipment.

EE. Comparable fiscal systems.

Comment: The Bureau of Land Management has a program in place (43 CFR 2803.1). This comparable program could be used as the foundation on which MMS can develop their own fiscal system for the utilization of the seabed on the OCS for siting, operation and transmission of power from renewable energy facilities.

FF. Surety bonds.

Comment:
Bonds can be used to help ensure two outcomes: (1) that the planned project is indeed constructed as permitted, and (2) that the mature project is decommissioned as permitted.

Surety bonds can be an effective tool to help make sure a permitted project is constructed according to the terms of the permit. However, if the amount required is too high, the need for a surety bond can become a hindrance to obtaining project financing. Again, so as not to create an obstacle that would delay the industry's development, we would suggest that the surety bond start out small. An option would be to start with a small surety bond, require the developer to meet certain pre-agreed development milestones, and if those milestones were not met, the developer would be given the option to increase the surety bond or forego the development rights.

Once under construction, and throughout operation, the developer must show the ability to be self-insured or to be able to acquire surety bonds that comply with the following laws in place:

- The Outer Continental Shelf Lands Act of 1953 (67 Stat. 462), as amended (43 U.S.C. 1331, et seq.) applies to offshore oil and gas and allows for bonds. By policy, bonds are required to guarantee offshore end-of-lease activities such as plugging wells and platform removal.
- The Surface Mining Control and Reclamation Act of 1977 (30 U.S.C.A. sec. 1201-1328) applies to surface coal mining on public and private lands and requires performance bonds sufficient to cover 100 percent of the estimated reclamation cost.
- The Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701, et seq.), allows the Secretary to require a bond for Title V rights-of-way such as power lines or communication facilities.

Specific questions:

23. ***What should the payment structure be designed to collect? Should payments be targeted at charging for use of the seabed? Should payments try to capture the opportunity costs of other activities displaced by the activity? Should the payment structure be designed to capture a portion of the revenue stream, and if so, under what circumstances?***

Comment: It is our perception that current payments from energy extraction projects in U.S. coastal waters are based on the depletion of a Public Trust resource. It must be noted that properly sited wind farms are not depleting any natural resources, nor will they displace other activities in the areas they are installed.

We believe that the institution of fees should be graduated in three phases.

The qualified developer that is awarded a pilot project should pay a one-time fee of $25,000 at the time of lease. The pilot developers would then pay ROW fees of $30 per acre annually in arrears for the interconnection cables within the wind farm and the length of the transmission cable. The fee would be determined on the basis of the average transmission ROW on federal lands in the state in which the cable lands. These would be the only charges on a pilot project. The reason for relief from royalty fees for pilot project developers is that the initial developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Other excessive initial costs will include an inordinate number of environmental studies before the appropriate number of studies are identified. The structures that will be built have never been built in U.S. coastal waters, so early specialty services will be needed from Europe before equivalent service companies and equipment are available in the U.S. Many specialty components will also need to be imported until manufacturing capacity is built in the U.S., which won't occur until the industry's continuance is assured. Pioneer developers will incur significantly higher costs than will developers that come later.

The second phase of the industry will correspond to the "wildcatter" phase of the development of the oil and gas industry. In this second phase, the one-time closing fee would be $100,000; the developers would pay ROW fees of $45 per acre; and annual land rental fees of $45 per acre for the footprint of the wind turbines. Royalties on projects in this second phase would be determined after 5 years. Royalties would be site-specific for each wind turbine.

When commercial projects are initiated later, commercial developers that win a development tract would be required to pay a one-time fee of $1,000,000 per project, an ROW fee of $50 per acre, $50 per acre for the footprint of each wind turbine, and royalties at a rate to be determined.

24. Offshore renewable energy technologies are in their infancy. Should the payment structure be designed to encourage the development of these activities until the technologies are better established?

Comment: We think the industry (involving each type of technology) should proceed in three phases.

The qualified developer that is awarded a pilot project should pay a one-time fee of $25,000 at the time of lease. The pilot developers would then pay ROW fees of $30 per acre annually in arrears for the interconnection cables within the wind farm and the length of the transmission cable. The fee would be determined on the basis of the average transmission ROW on federal lands in the state in which the cable lands. These would be the only charges on a pilot project. The reason for relief from royalty fees for pilot project developers is that the initial developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Other excessive initial costs will include an inordinate number of environmental studies before the appropriate number of studies are identified. The structures that will be built have never been built in U.S. coastal waters, so early specialty services will be needed from Europe before equivalent service companies and equipment are available in the U.S. Many specialty components will also need to be imported until manufacturing capacity is built in the U.S., which won't occur until the industry's continuance is assured. Pioneer developers will incur significantly higher costs than will developers that come later.

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25. What methods are used by the renewable energy industry to quantify the risk and uncertainty involved with estimating the size of a renewable energy resource, and evaluating its profitability?

Comment: In renewable energy projects there are multiple primary areas of risk:

- Resource: The long-term accessible magnitude and variability of the resource?
- Technology – will the technology perform as intended (this includes not only in terms of energy production, but up-time, maintenance costs and longevity)?
- Capital Cost – can the project actually be installed on budget – given that there is no history of this type of construction?
- Timing – Can the project be permitted, designed, and implemented on a predictable timeline?
- Electric Price – Will the actual electric price paid for the output we close to the predicted price when the project was initiated?
- Financing – Can the project be financed cost effectively?
- Renewable Energy Certificates – What will the value of the Renewable Energy Certificates (RECs) be when the project is operational?
- Production Tax Credits – Will the PTC's be in existence when the project commences operation?
- Environmental risks – Hurricanes, wave impacts, lightning, ice storms

Each one of these risks poses uncertainty with regard to the project's eventual profitability. Technology, capital cost and financing can be managed down to acceptable risks through extensive due diligence. Timing has been the historical enemy of large-scale deployment of renewable energy projects. It is important that this proceeding itself not become an extended impediment to developers. At present, with this proceeding ongoing, there is no discernable predictability with regard to when a project could be permitted and thus development activities are extremely limited.

Two completely unpredictable wildcards are the RECs and PTCs. Either of these programs could potentially be legislated out of existence, virtually bringing renewable energy development to a halt. RECs are managed by obtaining extensive knowledge of the REC programs in each state, along with projections of other renewable projects coming on line that could satisfy REC needs or alter the pricing, and lastly developing knowledge of the local political environments that could curtail the RECs in each state.

PTC's are managed by scheduling projects. Inevitably, as demonstrated with onshore wind projects, implementation is accelerated or delayed until it is certain that the project can be completed within a window of time that would qualify it for PTCs (i.e., implemented before they expire or delayed until the PTC is reenacted).

For wind projects, resources are evaluated in two phases. First a meteorological model is created to estimate the wind resources in the target area. The second step is to erect a metering tower to collect site-specific meteorological data, including wind speed measurements at various heights. Offshore renewable energy projects will also require collection of temperature, current and wave data.

In general, renewable energy projects are very capital intensive, but also have rather limited operating costs (relative to traditional fossil fuel fired power generation, where the primary operating cost is fuel). Profitability is measured by estimating output and gauging capital costs, costs of capital, financing costs, revenues and expenses, estimated up-time and maintenance costs, operating costs, and so on, plus depreciation and tax instruments.

26. What measures of profitability are commonly used as renewable energy investment decision criteria? How do bonus bids, rents, royalties, fees and other payment methods impact the profitability of these projects?

Comment: The projected profitability of a renewable energy project – leading to a Go/No-go decision on project financing – is determined by a complex interplay of factors that include, but are not limited to:

- Projected income from sales of electricity, ancillary benefits, green tags and/or emissions offsets
- Tax benefits such as tax credits, deductions and accelerated depreciation
- Opportunity costs, cost of capital, capital costs, time value of money, inflation, etc.
- Projected operating costs
- Insurance costs
- Projected monitoring and maintenance costs
- Resource magnitude and variability
- Risk factors, quantified
- Ability to get permits and leases
- Ability to find markets for the power
- Equipment costs
- Cable costs
- Services costs
- Many others
- Land rental fees
- Extraordinary expenses
- Reserve funds

We recommend that royalties only be introduced in the second phase of the three phases that we believe will occur in the development of the offshore renewable energy industry. Each ocean-based renewable energy technology will go through the same phases.

The first phase of the industry will feature pilot projects that will pay no royalties. The reason that complete royalty relief is necessary for the pilot projects is that the first projects will be significantly more expensive to implement than will be projects later on. Pilot project developers will be paying for establishing the supply chains, manufacturing base, procurement procedures, and services infrastructure that will benefit all fully commercial project development in the future. Other excessive initial costs may include an inordinate number of environmental studies before the appropriate number of studies are identified. The structures that will be built have never been built in U.S. coastal waters, so early specialty services will be needed from Europe before equivalent service companies and equipment are available in the U.S. Many specialty components will also need to be

imported until manufacturing capacity is built in the U.S., which won't occur until the industry's continuance is assured.

We recommend that, during the second phase of development, royalties only be collected after the projects are up and running for a period of at least 5 years. The royalties should be set to allow a satisfactory rate of return for individual projects. Thus, the 5-year moratorium will allow an analysis of project economics, given that each project will vary in terms of their efficiency and availability, plus the build-out costs.

Full royalties should be collected during the third, fully commercial phase of development of offshore renewable energy resources. If the power is being delivered to shore, a formula will be needed to consider added costs of transmission over greater distances to shore (the German and Danish governments increase the length of the favorable feed-in tariffs by 6 months for each extra kilometer distance from shore beyond about 8 miles).

The pilot projects and pre-commercial second-phase projects will have furnished MMS with sufficient experience with which to judge what the appropriate royalty rates are that can be collected from offshore renewable energy projects.

27. Are there economic models available to calculate the profitability of renewable energy proposals?

Comment: There are standard models available that have been used for onshore development.

A simplified version of financial models, RETScreen, is available from Natural Resources Canada, a government division, at the website:

"http://www.retscreen.net/ang/menu.php"

Financial models have been developed and used for a number of early commercial offshore wind farms in Northern Europe. However, many numeric inputs to those models are not applicable in the American renewable energy market, which has markedly different financial underpinnings (for example, no guaranteed price of power, no long-term government policy for renewables, uncertainties in continuance of the production tax credit, RECs prices, and so on).

Further, the costs of building and operating offshore renewable energy facilities in the U.S. are as yet unknown and are only being estimated. This is a key purpose of recommending pilot projects of sufficient size to develop an experience base to realistically estimate the economics of commercial scale offshore renewable energy projects.

28. ***Increased reliance on renewable energy offers both economic and environmental benefits. What are the public benefits to society and do they differ from market driven benefits?***

Comment: Public Benefits to Society:

- Reduced pollution and the consequent health benefits, including reduced medical costs
- Reduced emissions of greenhouse gases
- Reduced reliance on foreign oil and gas
- Reduced reliance on unreliable sources of supply
- Domestic source of energy
- No water consumption
- Minimal physical environmental impact
- Simplified conversion and delivery of converted energy
- Reduction in sick days due to respiratory ailments

The market benefits are:

- Increased energy production (these are simply new energy resources and fewer new depletable resources will be required)
- Increased diversification (decreased reliance on traditional fuels)
- Price stability (no volatility in fuel cost)
- Decreased trade deficit
- Increased employment in marine, industrial and service sectors
- Increased tax base

Obviously, there are benefits on both sides, both to society and to the market for renewable energy equipment and consumption of electricity. Many of the societal benefits do not transfer directly, or at all, to the power generation industry. The health benefits, volatility in fuel sources and, consequently, utility bills, transfer to society at large as an impact of renewable projects but cannot be directly transferred to the bottom line of the renewables industry.

29. In section 8 (p) of the OCSLA as amended by Section 388 of the Energy Policy Act, the Secretary must require the holder of a lease, easement or right of way granted under that subsection to furnish a surety bond or other form of security. What options should MMS consider to comply with this requirement?

Comment: As part of becoming qualified as an applicant, the developer must show the ability to be self-insured or to be able to acquire surety bonds that comply with the following laws in place:

- The Outer Continental Shelf Lands Act of 1953 (67 Stat. 462), as amended (43 U.S.C. 1331, et seq.) applies to offshore oil and gas and allows for bonds. By policy, bonds are required to guarantee offshore end-of-lease activities such as plugging wells and platform removal.
- The Surface Mining Control and Reclamation Act of 1977 (30 U.S.C.A. sec. 1201-1328) applies to surface coal mining on public and private lands and requires performance bonds sufficient to cover 100 percent of the estimated reclamation cost.
- The Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701, et seq.), allows the Secretary to require a bond for Title V rights-of-way such as power lines or communication facilities.

COORDINATION AND CONSULTATION

Questions relating to coordination and consultation:

30. ***While MMS considers this ANPR an appropriate start at consultation with interested and affected parties, what other efforts could be undertaken at this early stage of program development?***

Comment: Early and continuing dialog with potential applicants.

Ensure that all pilot projects are given a definitive Scope of Work that will not be modified, nor overburden the developer, before completion. An expedited approval is needed for pilot projects to reduce the uncertainty and the costs (which will be much higher than for later projects).

Establish strict internal guidelines to ensure that the MMS will adhere to the timelines that are defined for the NEPA process.

Provide an easy-access protocol to facilitate communications between MMS and developers and potential developers.

Develop a mutually agreed-to timeline and chart of permitting processes, contacts, links, and so on that is clearly laid out to facilitate the process of getting approvals and leases for renewables projects on the OCS.

MMS could expand the section of their website devoted to renewable energy projects on the OCS. The presence of this section is a good first step. The section can be expanded to include links to a library of existing studies (both domestic and foreign), project links both domestic and foreign, technology links, organizational links for specific renewable energy technology organizations, and links to laws and regulations that are pertinent to renewable energy projects. We believe that the MMS renewable energy web site could become a portal that would aid all regulators and legislators interested in the development of renewables industries on the OCS and the developers of renewables projects on the OCS.

MMS could sponsor and organize a conference that would bring together in one location representatives from all federal stakeholders in development of renewable projects on the OCS. This group of invitees could include representatives from, for example but not limited to, the DOI (FWS, MMS, BLM), DOE (NREL), USCG, FERC, DOC (NOAA, NOS, NMFS, NWS), EPA, U.S. Navy, DHS (USCG), U.S. Army Corps of Engineers, coastal States (air and water quality, coastal consistency), and so on. This conference, which should be a biennial event, would serve to establish the cross-cutting relationships that will be necessary to keep all regulatory stakeholders in a state of currency of understanding of the status and requirements for implementation of policies designed to foster the development of alternate energy sources on the OCS. The conference should include industry invitees to present and describe their activities, the challenges they are facing, the progress they are making, the successes they've achieved and the failures they have experienced. This will give the regulating community a better insight into the needs of the industries developing renewables projects on the OCS.

31. Should a broad approach be taken to developing a program or should efforts be targeted to specific regions with commensurate coordination and consultation?

Comment: In the beginning, MMS should establish multiple pilot projects within multiple coordinated management areas. Each one of these areas should be selected in concert with the applicants.

The department should develop a coordinated management plan on an ecosystem basis for each selected area. Each plan should include all federal land management agencies and state and local governments when appropriate within the designated area.

32. Would the establishment of Federal/state cooperatives for targeted areas be useful? Similar to the process for OCS oil and gas program formulation, should we solicit comments on which areas of the OCS should be included or excluded from the program? After establishing where there is consensus in support of program activities, should coordination and consultation efforts be directed to those areas? Conversely, should such efforts be curtailed or abandoned for areas recommended for exclusion?

Comment: Yes, but not at this time. It would be more fruitful to encourage developers to propose and execute pilot projects in federal waters that would provide the baseline data and experience for defining the safeguards and regulations that will be necessary to protect the Public Trust resource. Once this data and experience is in hand, federal and state authorities will have a factual basis to serve as a foundation for regulating offshore renewable projects in a cooperative manner.

We perceive that developers will propose projects in their own areas of interest. Any areas that should be excluded from interest would be discovered as part of a pre-application consultation with MMS.

While it is possible that multiple developers may wish to build projects on the same or overlapping sites, we believe that the number of offshore project developers in the U.S. will be very limited for several years. This temporary constraint on the number of participants is due to the high financial obligations that must be satisfied to permit, plan, build and operate an offshore renewable energy facility.

We suggest that the chief goal immediately is to identify and permit pilot projects, thus initiating the offshore renewable energy industry in the U.S., which is one of the purposes of the Energy Policy Act of 2005, the reason that MMS was entrusted with their new oversight authority, and consistent with the direction given in the State of the Union address.

Solicitation of comments on areas of development should come after areas for pilot projects have been identified, permitted and the pilot projects become operational. Developers are the ultimate judges of where to build offshore renewable energy projects.

The NEPA process will ensure that alternatives will have been thoroughly explored before the pilot projects are built.

Exclusionary areas already exist. Proper initial consultation and due diligence during site selection will make this a non-issue.

33. What are the critical stages (e.g., site evaluation, application, competitive sale) for consultation with affected parties?

Comment: The most important first stage is the development of regulations as swiftly as possible in order to provide a clear path for the development of pilot projects that will subsequently provide factual data with which to refine the regulatory regime that will guide the development of a renewable energy industry on the U.S. OCS.

The next most critical consultation with affected parties is to help qualified developers bring pilot projects online as quickly as possible.

As we stated previously in this response to the ANPR, we believe a competitive bidding process will only become realistic after an initial regulatory regime has been defined and pilot projects have been built. We believe that there will be very few proposals for projects initially because of the extraordinarily high financial barriers to entry, associated risks at this stage of development of the offshore renewable energy industry. The risks include uncertain rates of return, timely equipment availability, supply chain inadequacies in the U.S., volatile raw materials prices and supplies, international exchange rates, and many others.

34. Should procedures for consulting with interested and affected parties be codified in the regulations? In general? In detail?

Comment: It is too early in the process of development of the offshore renewable energy industry to strictly structure the relationships between regulators and project proposers. We recommend that consideration be given to comprehensive rulemaking only after several years of operation of pilot projects. These projects will provide the experience basis for defining future regulatory review rules.

35. What processes can MMS use to provide for balance between consultations and the time and burden to the projects?

Comment: We are assuming that MMS will have an agreed-to Scope of Work that they will supply to the prospective developer to guide them through the permitting process. This will save time and the burden on project development, particularly after pilot projects have provided a factual basis for optimizing the permitting process.

If MMS supplies the Scope and Format for the regulations for the permitting of offshore wind farms to standardize the process, we believe that it would be onerous for any applicant to be required to engage a third party consultant as a prerequisite to performing the actions necessary to complete an FEIS.

In an extensive review and budgeting of the financial burdens of developing a full EIS, our initial budget projections, based on the Scope we included in this response as Attachment I, showed expenditures of approximately $3.5 million per site would required to complete the

work for permits if the applicant was to manage the process in-house. This sum covers all appropriate tests, actions, filings, travel, studies, and fees necessary to supply the information required to complete a DEIS and an FEIS.

Because this is a nascent industry, we feel it is appropriate that, for the first 5 years, all qualified applicants be allowed to follow the format that you prescribe for the granting of a DEIS and an FEIS. We feel the industry would not be well-served at this moment to require a third party consultant. We understand that this is commonplace in the GOM (Gulf of Mexico). We feel that after the first half dozen or so offshore wind farms are permitted that a third party consultant avenue would be appropriate. A number of wind farms would then be underway, the process would be proven, and the maturation of the offshore wind industry in the U.S. would have begun. Part of this growth process would include the entry into the industry of a greater number of participants, thus increasing competition and reducing the costs of the permitting work. Information would be available within the public arena, giving the third party consultants a basis to build from, thus reducing the barriers to entry for new applicants. They would, in essence, be standing on the shoulders of the pioneers that paid to develop the processes that would have become standardized.

Our research and experience have shown that engagement of a third party consultant increases the costs of acquiring final permits by a factor of a minimum of three and, in some cases, much higher. To place this additional financial burden on all pioneering applicants would be counterproductive at this phase of the industry.

36. Are there specific aspects of the new ROW rule issued by the Bureau of Land Management that should be reviewed by MMS for consideration in its rulemaking?

Comment: The new 2006 rental rates issued by the BLM for transmission rights of way (ROW) (CY 2006 LINEAR RIGHT-OF-WAY RENTAL SCHEDULE DOLLARS/ACRE/YEAR USE FOR CALENDAR YEAR 2006) indicates that there are a wide range of fees paid for ROW leases. Winergy Power recommends using the average ROW tariff charged in the state where the cable makes landfall as the correct fee to charge for wind farms and associated transmission lines.

Should there be a sharing of project area by an offshore wind farm and an ocean energy conversion device farm, MMS will be responsible for negotiating a fee with the secondary applicant.